CHAPTER 2

CONTROLS AND OPERATION

This chapter is an overview of the Javelin's controls and indicators, operation of the Javelin, and CLU display indicators.

2-1. CONTROLS AND INDICATORS

The Javelin controls allow the gunner to perform and monitor all operations. The controls are located on the handgrips except for the diopter adjust ring and the power switch.

a. **Diopter Adjust Ring.** The diopter adjust ring is located on the CLU eyepiece assembly (Figure 2-1). The gunner uses the diopter adjust ring to adjust the focus of the image. Any gunner with vision correctable to 20/20 can use the CLU to see an in-focus image without using glasses. The alignment mark is located on the eyepiece. Align the number that corresponds with the adjustment. This adjustment is constant on all CLUs.

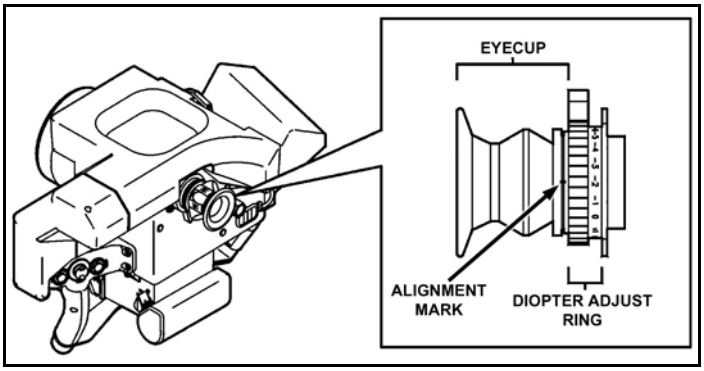

Figure 2-1. Diopter adjust ring.

b. **Power Switch.** The power switch is a rotary switch located on the lower rear corner of the left-hand side of the CLU main housing (Figure 2-2). The power switch controls the Javelin's mode of operation and each position brings different components of the Javelin into operation. The power switch has four positions: OFF, DAY, NIGHT, and TEST.

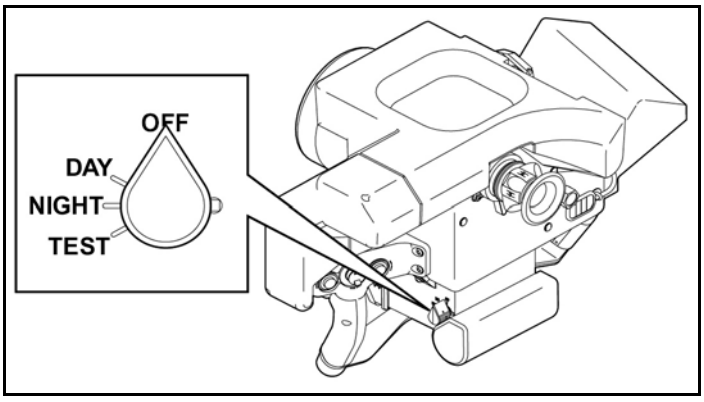

Figure 2-2. Power switch positions.

(1) ***OFF Position***. The Javelin is in the OFF mode when the power switch is in the OFF position. In this mode, no battery power is applied to the Javelin. The day FOV can be used for surveillance and target detection, but the NVS cannot be used and the seeker cannot be activated. The missile cannot be launched.

(2) ***DAY Position***. The Javelin is in the DAY mode when the power switch is in the DAY position. In the day mode, power is applied to the CLU. In the day mode, there is a day FOV but no NVS.

(3) ***NIGHT Position***. The Javelin is in the NIGHT mode when the power swithc is in the NIGHT position. This mode gives the gunner the full Javelin capability. Once the NVS is cooled down (about 2.5 to 3.5 minutes), the gunner selects WFOV, NFOV, and day FOX, which gives him the full missile capability.

(4) ***TEST Position***. The Javelin enters a built-in test (BIT) routine (Figure 2-3) when the power switch in the TEST position. The power switch is spring-loaded when in the test position. When the gunner moves the power switch to the TEST position, it then returns to the NIGHT position upon release.

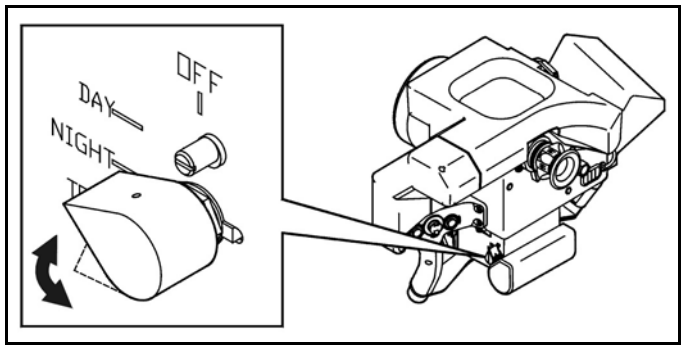

Figure 2-3. Power switch—TEST position.

(5) ***Return to OFF***. Before turning the power switch to OFF, the gunner must leave the power switch at DAY for at least two seconds to allow the flipper mirror time to move to the power switch to the DAY position.

c. **Left Handgrip Controls**. The left handgrip has the following controls: the filter select switch (FLTR), the focus adjust switch (FOCUS), the sight select switch (SGTSEL), and the seeker trigger (Figure 2-4).

(1) ***Function of Controls***. These controls are used to assist the gunner.

- Conduct surveillance.
- Detect, classify, and recognize targets.
- Determine if a target is in range.
- Activate the seeker.
- Reacquire the target in seeker FOV.
- Lock the seeker onto the target.
- Assess battle damage.
- Activate the countermeasure.

(2) ***Filter Select Switch*** (Figure 2-4). The filter select switch (FILTR) is the left switch on the left handgrip. It is a pushbutton switch used to select the NVS filter, this prevents the enemy from detecting the CLU using counter measure.

(3) ***Focus Adjust Switch***. The focus adjust switch (FOCUS) is the center switch on the left handgrip (Figure 2-4). This switch is a self-centering toggle switch used to focus the image on the CLU display during NVS (WFOV or NFOV) operation.

(4) ***Sight Select Switch*** (Figure 2-4). The sight select switch (SGTSEL) is the right switch on the left handgrip. This switch is a pushbutton switch used to select between the day FOV, WFOV, NFOV, and seeker FOV. If the gunner is in seeker FOV and needs to return to the day sight or NVS, he presses the SGTSEL switch.

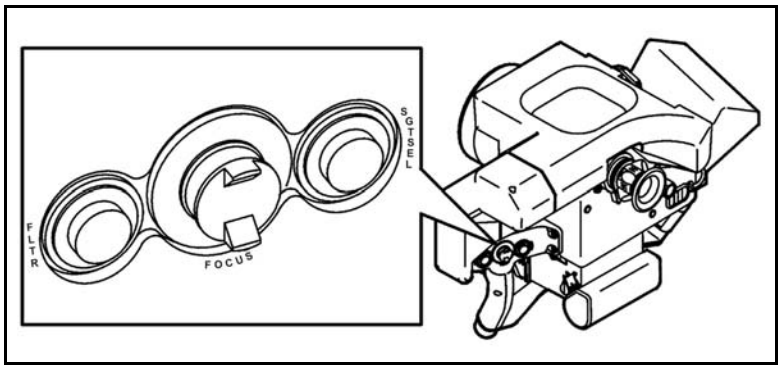

Figure 2-4. Left handgrip controls.

(5) ***Seeker Trigger***. The seeker trigger is the trigger located on the fingergrip (front) side of the left handgrip (Figure 2-5). This trigger activates the seeker, locks the seeker onto the target, and enables the *fire trigger*. A trigger guard protects against accidental activation.

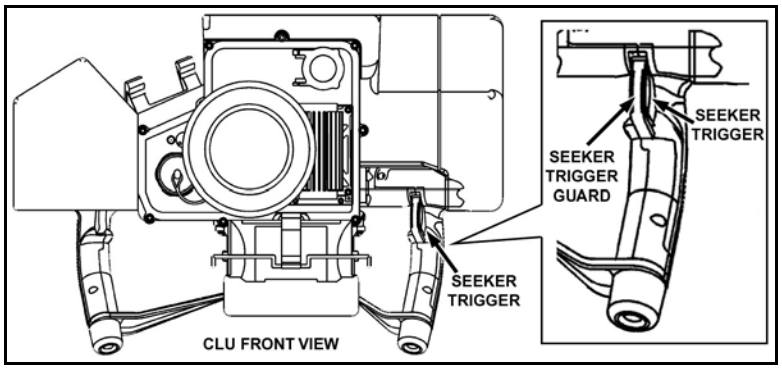

Figure 2-5. Left handgrip controls—seeker trigger.

d. **Right Handgrip Controls.** The right handgrip has the following controls: the attack select (ATTK SEL) switch, the gate adjust/contrast and brightness (GATE ADJ/CTRS & BRT) switch, and the fire trigger (Figure 2-6, page 2-4). The controls on the right handgrip:

- Change the attack mode, if necessary.
- Adjust the track gates so the seeker can lock on the target.

- Adjust NVS contrast and brightness.
- Fire the missile.

(1) ***Attack Select Switch***. The attack select (ATTK SEL) switch is the right switch on the two-switch console on the right handgrip (Figure 2-6). It is a pushbutton switch that toggles between the top attack and direct attack modes. The top attack mode is the default attack mode and is automatically selected when the seeker is activated.

(2) ***Gate Adjust/Contrast and Brightness Switch***. The gate adjust/contrast and brightness (GATE ADJ/CTRS & BRT) switch (Figure 2-6) is the left switch of the two-switch console on the right handgrip. It is a self-centering switch that moves up, down, left, and right. This switch serves two functions depending on whether the CLU display image is from the NVS or the seeker. To change the mode of attack, the gunner must be in Seeker FOV.

(a) ***Night vision sight***. When the CLU displays an image from the NVS (WFOV or NFOV), the gate adjust/contrast and brightness (GATE ADJ/CTRS & BRT) switch is used to adjust the contrast and brightness of the CLU display image. When the NVS first comes up, both the brightness and contrast are electronically adjusted so only a minimum amount of adjustment by the gunner is required.

- *BRIGHTNESS*. Brightness is adjusted by moving the GATE ADJ/CTRS & BRT switch vertically (up and down).
- *CONTRAST*. Contrast is adjusted by moving the GATE ADJ/CTRS & BRT switch horizontally (left and right).

(b) ***Seeker***. When the CLU display shows the seeker (Figure 2-7) FOV, the GATE ADJ/CTRS & BRT switch is used to adjust the size of the track gates (the track gates are the four corners of the open-sided box shown in the seeker FOV).

- UP and DOWN. UP moves the track gates apart vertically; DOWN moves the track gates together vertically.
- LEFT and RIGHT. LEFT moves the track gates together horizontally; RIGHT moves the track gates apart horizontally.

(3) ***Fire trigger***. The fire trigger is on the front side of the right handgrip at the index finger level (Figure 2-6). When the gunner acquires a missile lock-on target squeeze and hold seeker trigger, he squeezes the fire trigger to launch the missile.

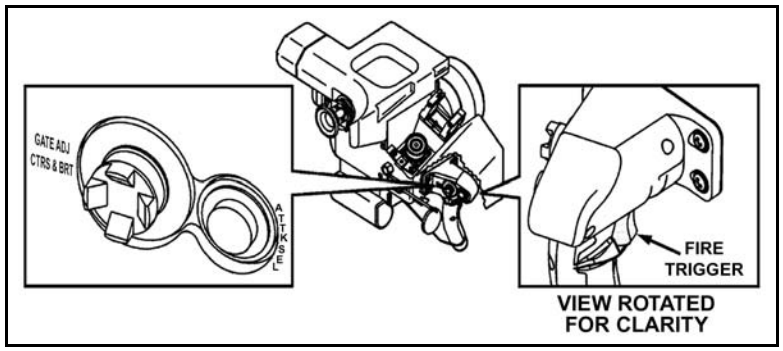

Figure 2-6. Right handgrip controls.

2-2. COMMAND LAUNCH UNIT STATUS INDICATORS

The CLU has status indicators that appear around the CLU display. These status indicators are never all lit at the same time during normal operation. The status indicators (Figure 2-7) surround the CLU display images, whether they are from the daysight (day FOV), from the NVS (WFOV or NFOV), or from the seeker in the missile (seeker FOV). The gunner observes the status indicators by looking into the eyepiece. These indicators identify Javelin operational modes, conditions, and malfunctions. There are fourteen indicators, each coded in colors: green, amber, or red.

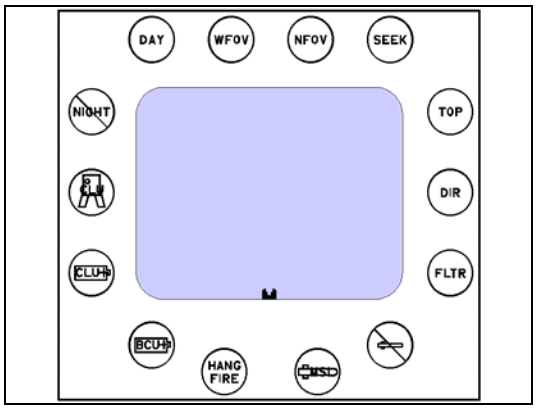

Figure 2-7. CLU display indicators.

a. **Green Status Indicators**. Seven of the fourteen status indicators are green (Figure 2-8). Green signifies the monitored function is in a satisfactory condition and that it is okay to proceed with normal operations.

(1) ***Day (DAY) Indicator*** (DAY). The DAY indicator is located at the top of the CLU display and at the far left. It lights when day FOV is selected when the power switch is in the day or night position.

(2) ***WFOV (WFOV) Indicator*** (WFOV). The WFOV indicator is located at the top of the CLU display and to the left of center. Solid ON indicates the CLU is in WFOV. When it *flashes*, it indicates the NVS has reached a focus limit.

(3) ***NFOV (NFOV) Indicator*** (NFOV). The NFOV indicator is located at the top of the CLU display and to the right of center. Solid ON indicates the CLU is in NFOV. When it **flashes**, it indicates the NVS has reached a focus limit.

(4) ***Seeker (SEEK) Indicator*** (SEEK). The SEEK indicator is located at the top of the CLU display at the far right. It lights within 3 seconds after squeezing the seeker trigger.

(5) ***Top (TOP) Attack Indicator*** (TOP). The TOP indicator is located on the right side of the CLU display at the top. It lights when the missile is in the top attack mode.

(7) ***Direct (DIR) Attack Indicator*** (DIR). The DIR indicator is located on the right side of the CLU display in the center. It lights when the missile is in the direct attack mode.

(8) ***Filter (FLTR) Indicator*** (FLTR). The FLTR indicator is located on the right side of the status display at the bottom. It lights when the NVS filter is selected.

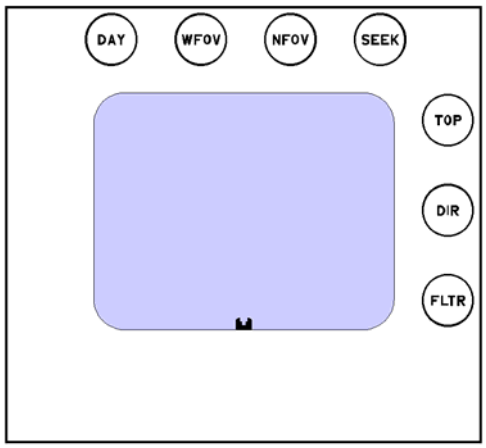

Figure 2-8. Status indicators—green.

b. **Amber Status Indicators.** The two status indicators are amber (Figure 2-9). Amber is used when a marginal condition exists. It also alerts the gunner to situations where caution, a recheck, or an unexpected delay is necessary.

(1) ***NVS Not Cool Indicator*** (NIGHT). The NVS NOT COOL indicator is located on the left side of the CLU display at the top. It lights when the CLU is in the night mode, but the DDC has not cooled to its operating temperature. The indicator goes out when the NVS is cooled to its operating temperature. If the DDC warms up again, this indicator comes back on.

(2) ***Missile Not Ready Indicator*** . The MISSILE NOT READY indicator is located at the bottom of the CLU display at the far right. Solid ON indicates the missile flight information is not downloaded from the CLU, missile BIT is not complete, or seeker is not cooled. A flashing MISSILE NOT READY indicator indicates the missile electronics are close to an overheat condition. The missile shuts down within 30 seconds after the flashing starts.

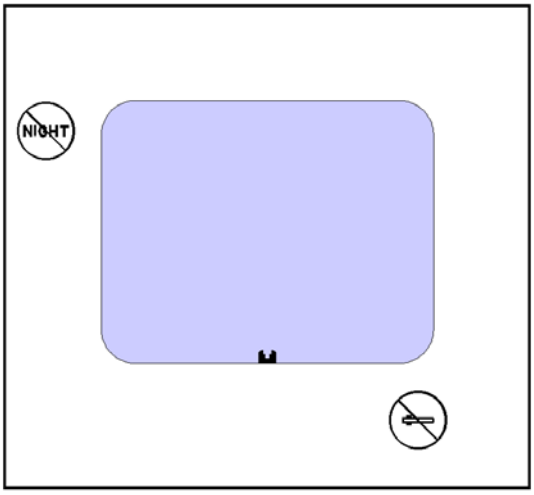

Figure 2-9. Status indicators—amber.

c. **Red Status Indicators**. Five of the status indicators are red (Figure 2-10). There are two types of red indicators. A flashing red indicator warns the gunner of an emergency condition where action must be taken. A solid red indicator alerts the gunner the Javelin is inoperative and a successful missile launch is not possible until corrective action is taken.

(1) ***Missile BIT Failure Indicator*** . The MISSILE BIT FAILURE indicator is located at the bottom of the CLU display and to the right of center. Solid ON indicates the missile BIT has detected a failure in the missile and flashes to indicate a misfire when the gunner squeezes the fire trigger and the missile does not launch.

(2) ***Hangfire Indicator*** . The HANGFIRE indicator is located on the bottom of the CLU display and to the left of center. The HANGFIRE indicator flashes to indicate a missile hangfire when the gunner squeezes the fire trigger and the missile does not launch.

(3) ***Battery Coolant Unit (BCU) Indicator*** . The BCU indicator is located at the bottom of the CLU display at the far left. After seeker activation, the BCU indicator flashes to indicate the BCU has about 30 seconds of operating time remaining and illuminates solid red when the BCU is spent.

(4) ***CLU Battery Indicator*** . The CLU BATTERY indicator is located on the left side of the CLU display at the bottom. The indicator lights to indicate the CLU battery has about 5 minutes of operating time remaining.

(5) ***CLU BIT Failure Indicator*** . The CLU BIT FAILURE indicator is located on the left side of the CLU display in the center. The CLU BIT FAILURE lights to indicate the CLU has failed an automatic built-in test.

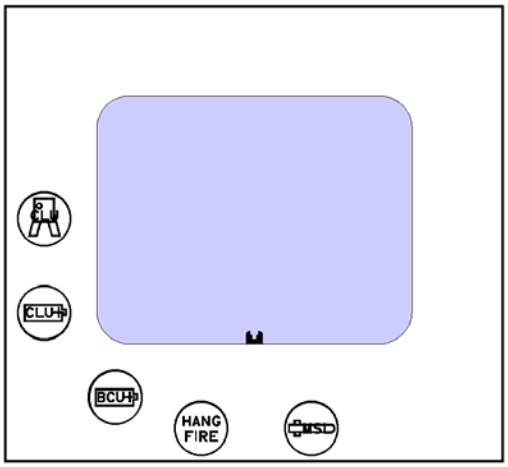

Figure 2-10. Status indicator—red.

2-3. COMMAND LAUNCH UNIT DISPLAY INDICATORS

The command launch unit has display indicators include stadia, reticles, track gates, and crosshairs.

a. **Stadia**. Stadia are seen in all CLU fields of view. They change their appearance, size and location according to the FOV selected. The CLU has three different stadia for each of the three CLU fields of view. The day FOV stadia are seen in all FOVs, but are used only in day FOV. The WFOV and NFOV stadia are present only in their respective fields of view.

(1) Day FOV stadia (Figure 2-11) are attached permanently to and appear at the bottom center of the CLU display.

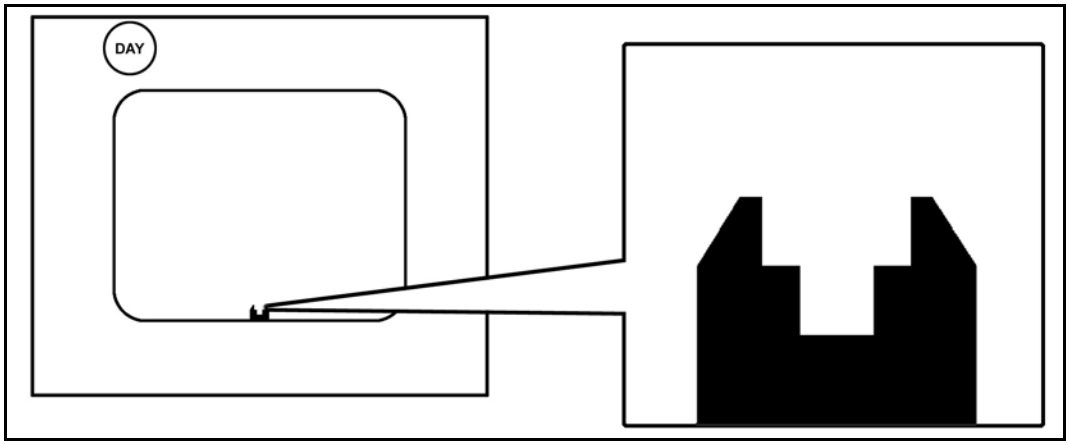

Figure 2-11. Stadia (day FOV).

(2) WFOV stadia consist of two vertical lines centered at the top of the CLU display (Figure 2-12A). The WFOV stadia are visible only in WFOV.

(3) NFOV stadia also consist of two vertical lines centered at the top of the CLU display (Figure 2-12B). The NFOV stadia are visible only in NFOV.

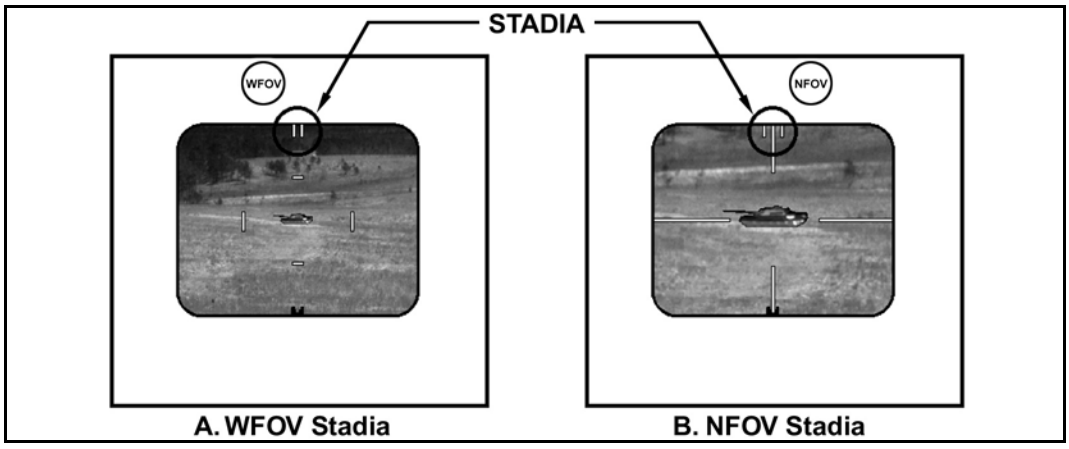

Figure 2-12. NVS stadia comparisons.

b. **Reticles**. In WFOV and NFOV, lines appear on the CLU display, and the configuration of lines in the reticles change from WFOV to NFOV, which allows the gunner to identify the FOV just by looking at the display (Figure 2-13).

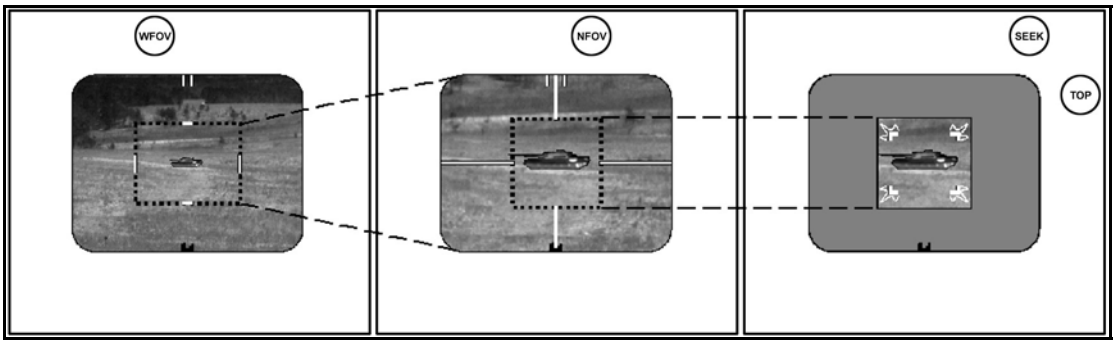

Figure 2-13. Reticle area versus FOV change.

c. **Track Gates**. The track gates (Figure 2-14) are used by the gunner to lock the seeker on target. The gunner activates the seeker and the track gates appear and flash in the CLU display. The track gates are a visual indication the seeker is active but not locked on the target.

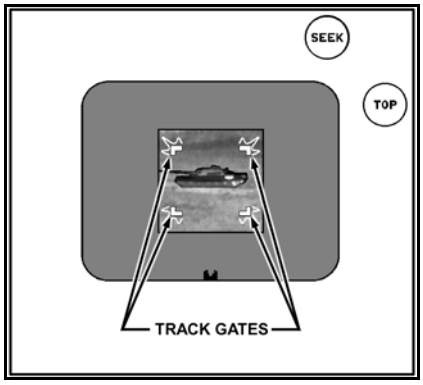

Figure 2-14. Track gates.

d. **Crosshairs**. The gunner uses the crosshairs (Figure 2-15) to designate the center of mass, which the seeker locks on. The crosshairs first appear and are flashing when the gunner squeezes and holds the seeker trigger. After the seeker locks on the target, the track gates and crosshairs become solid.

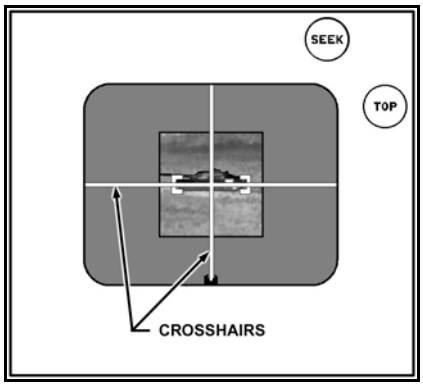

Figure 2-15. Crosshairs.

2-4. PREPARATION FOR FIRING

During preparation, the gunner performs a built-in-test (BIT), inspects the round, and prepares to fire. There are seven steps in preparing the Javelin for firing.

a. **Prepare the Javelin Components**.

(1) Place the round on the ground with the flat sides of the end caps down.

(2) Place the carry bag on the ground on the left side of the round.

b. **Remove the CLU from the Carry Bag**.

(1) Open the carry bag.

(2) Grasp the CLU by the handgrip and remove it from the carry bag.

c. **Install the CLU Battery**. The battery compartment is located on the bottom of the CLU. Take the CLU and turn it 180 degrees (Figure 2-16). The battery compartment cover is held in place by a wire bail. Detach and move the wire bail cover out of the way. The compartment is equipped with a battery connector. This connector mates with the corresponding connector on the battery. Align the two connectors and attach. Replace the battery compartment cover and reattach the wire bail.

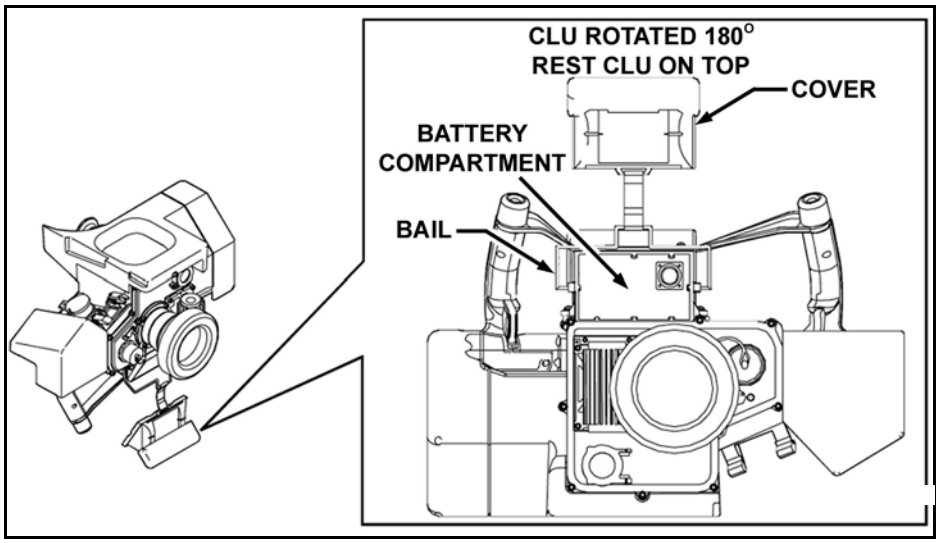

Figure 2-16. Battery compartment.

d. **Connect the CLU to the Round** (Figure 2-17). Kneel on the left side of the round, at the forward end, facing forward.

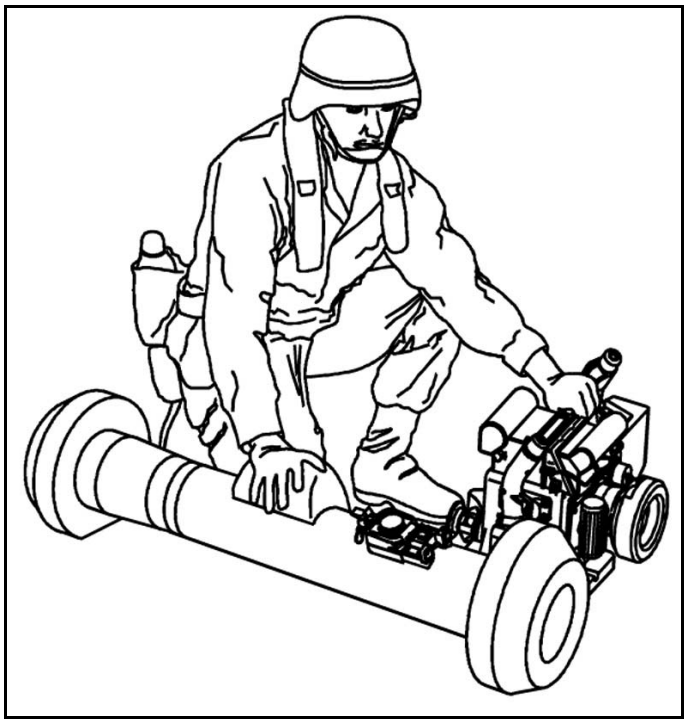

Figure 2-17. Connect the round to the CLU.

(1) Remove the protective cover from the CLU and round interface connectors. Pull on the lanyard tab to snug the protective cover against the side of the round and CLU. Position the protective covers so they do not interfere when the CLU and round are connected.

(2) Grasp the handgrips and lift the CLU into position over the CLU interface connector. Keep the eyecup pointed toward the aft end of the round (Figure 2-18).

(3) Place the round interface bracket in the round hooks.

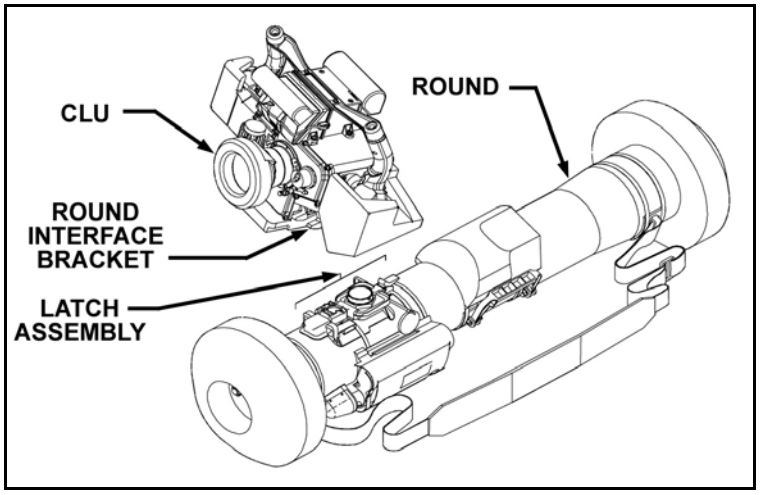

Figure 2-18. Connect the CLU to the round.

(4) Slide the CLU toward the latch release and press down on the CLU to engage the CLU and the round interface connectors. When the latch release snaps into place, the CLU and round are connected (Figure 2-19).

(7) Ensure the CLU and the round are connected correctly by rocking the CLU from side to side before attempting to pick up the Javelin.

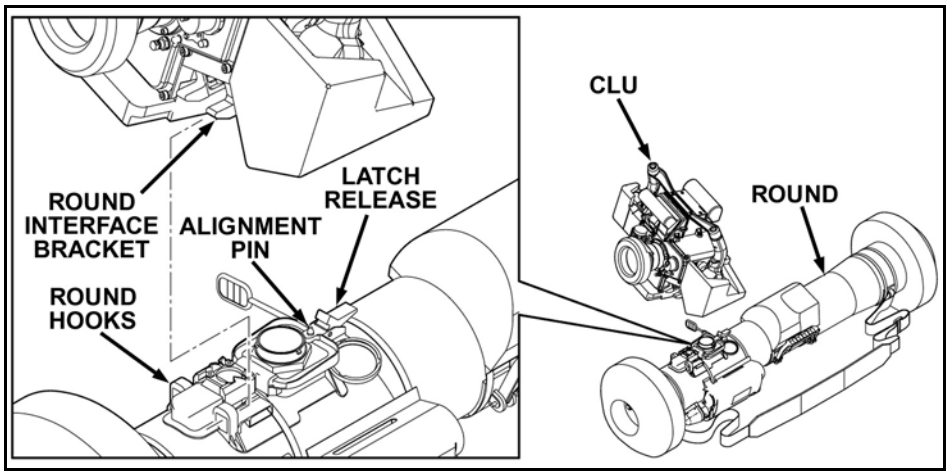

Figure 2-19. Connect the CLU to the round.

e. **Turn the Power Switch from the OFF Position to the NIGHT Position** (Figure 2-20).

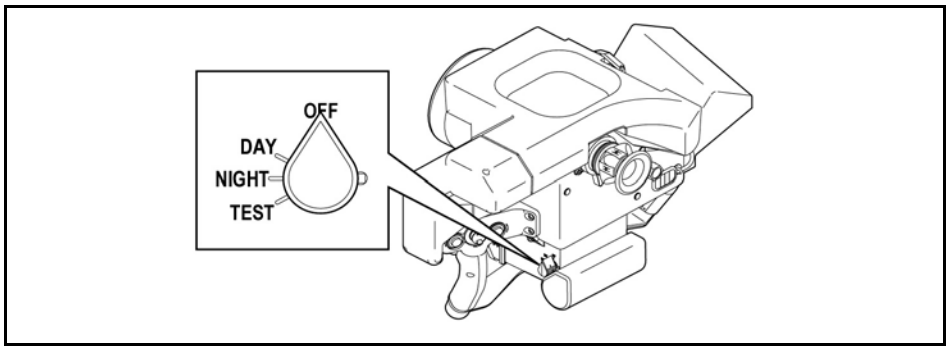

Figure 2-20. Power switch.

f. **Remove the Forward End Cap** (Figure 2-21).

(1) Remove the locking pin from the forward end cap by pulling straight up on the wire rope.

(2) Using the left hand, turn the forward end cap latch release counterclockwise.

(3) Grasp the handgrip with the right hand and lift the front end of the Javelin enough to raise the forward end cap off the ground.

(4) Slide the forward end cap off the round. If the forward end cap does not come off press the manual release button until the hissing stops. Set the open end of the round on the forward end cap to prevent dirt and debris from obstructing the seeker. When the

forward end cap is removed, the gunner must use *extreme caution* not to damage the seeker or allow foreign material to come in contact with the seeker.

CAUTION
With the forward end cap removed, the seeker is exposed. Use extreme caution when tipping the Javelin forward to ensure no foreign material comes in contact with the seeker.

(5) Inspect the open end of the round for dirt and foreign material. Remove any dirt or foreign material that is present.

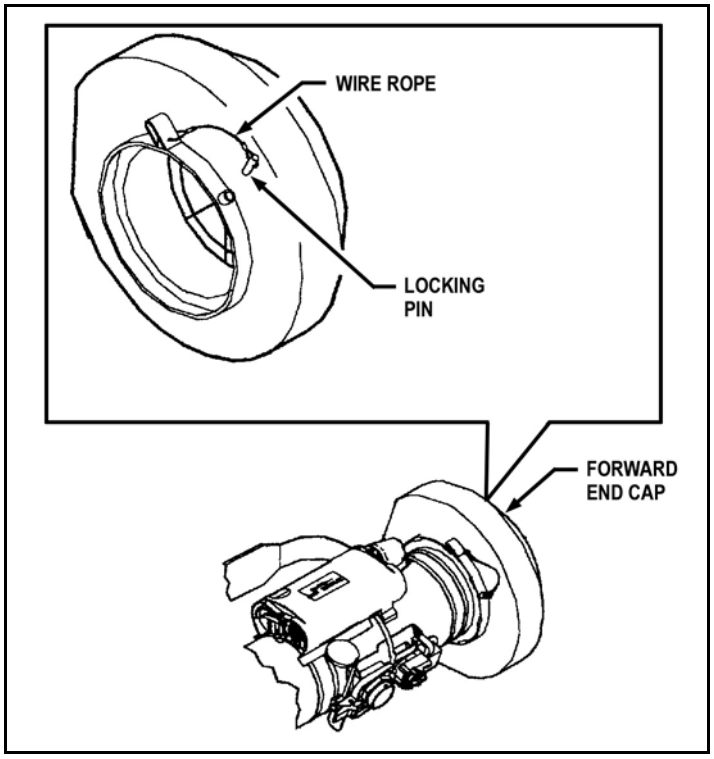

Figure 2-21. Remove the forward end cap.

g. **Open the Lens Covers**. Ensure the daysight and NVS lens covers are completely open.

2-5. FIRING POSITIONS

Firing positions for the Javelin include: sitting (bent knees or legs crossed), the kneeling (using one knee or both knees), standing supported, and the prone supported.

a. **Sitting Position.**

(1) Sit on the left side of the Javelin facing the direction of fire.

(2) Check the backblast area.

(3) Grasp the left handgrip of the CLU with the left hand. Place the right hand under the round near the shoulder pad.

(4) Lift the Javelin in a single, smooth motion and position the shoulder pad on the right shoulder.

(5) Assume a comfortable sitting position with legs crossed (Figure 2-22A) or knees bent (Figure 2-23B).

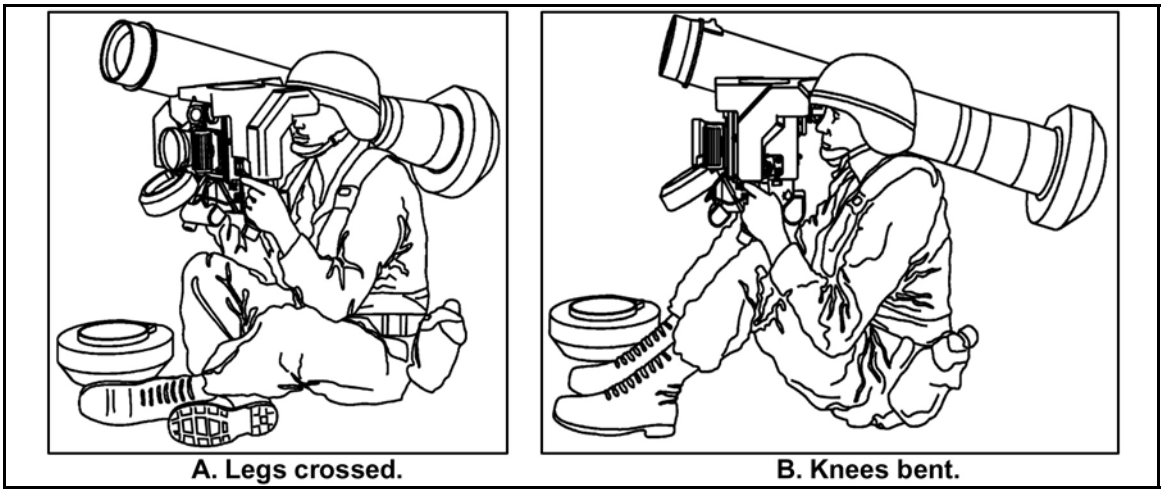

Figure 2-22. Javelin sitting firing position.

(6) Adjust the body while holding the CLU.

(7) Check the overhead flight path between the target and the firing position by sighting along the top of the round. The missile must have a clear flight path once launched.

(8) After assuming the sitting position, ensure the forward end cap is on the ground, in front of and slightly to the right of the right leg or foot. The gunner is prepared.

b. **Kneeling Position**.

(1) Kneel on the left side of the Javelin facing the direction of fire.

(2) Check the backblast area.

(3) Grasp the left handgrip of the CLU with the left hand. Place the right hand under the round near the shoulder pad.

(4) Lift the Javelin in a single, smooth motion and position the shoulder pad on the right shoulder.

(5) Kneel in a comfortable position with one knee (Figure 2-23A) or both knees on the ground (Figure 2-23B).

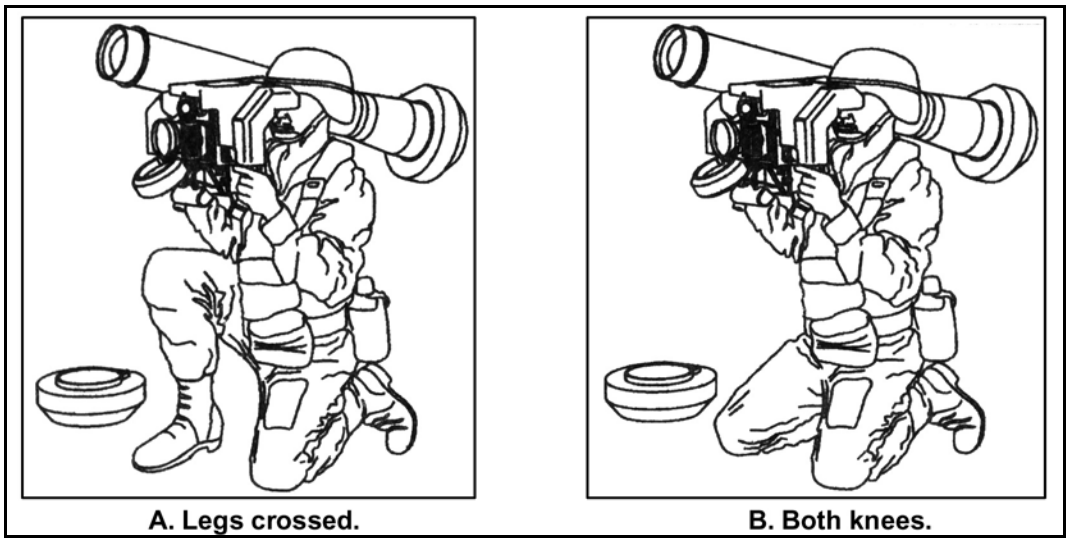

Figure 2-23. Javelin kneeling firing position.

(6) Hold the CLU by the right handgrip and adjust the body until comfortable with the Javelin.

(7) Check the overhead flight path between the target and the firing position. To do this, sight along the top of the round. The missile must have a clear flight path once launched (Figure 2-24).

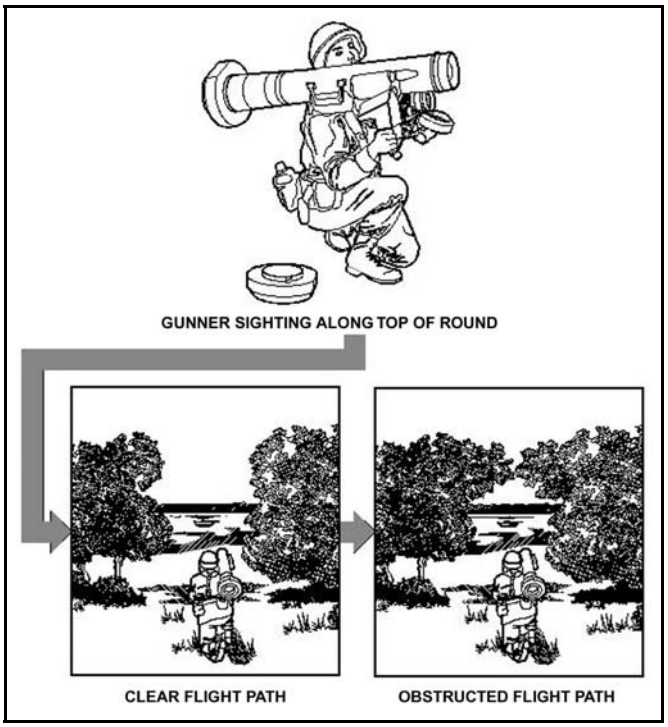

Figure 2-24. Gunner sights along the top of the round for obstructions.

(8) After assuming the kneeling position, ensure the forward end cap is on the ground, in front of and slightly to the right of the right leg or foot.

(9) The gunner is now prepared to fire the Javelin.

c. **Standing Supported Position**.

(1) Stand on the left side of the Javelin facing the direction of fire. Take up a kneeling position with the right knee on the ground.

(2) Check the backblast area.

(3) Grasp the left handgrip of the CLU with the left hand. Place the right hand under the round nearest the shoulder pad.

(4) Lift the Javelin in a single, smooth motion and position the shoulder pad on the right shoulder.

(5) From this one knee position, stand up keeping the back straight and the weight balanced. The gunner keeps his balance by standing with the legs spread a comfortable distance apart (Figure 2-25).

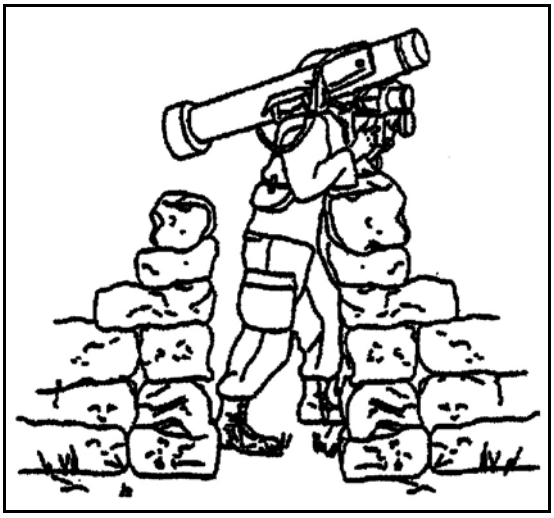

Figure 2-25. Standing supported firing position.

(6) Move the right hand to the right handgrip of the CLU. Place the elbows on the edge or rim of the fighting position or other steady feature to provide support.

(7) Adjust the body until the Javelin feels comfortable.

(8) Check the overhead flight path between the target and the firing position. To do this, sight along the top of the round. The missile must have a clear flight path once launched.

(9) After assuming a firing position, ensure the forward end cap is on the ground, and slightly to the right of the right leg or foot after firing. The gunner is now prepared to fire the Javelin

d. Prone Supported Position.

(1) Set the round on the ground with the flat sides of the end caps face down. The CLU interface connector and latch assembly should be face up.

(2) Ensure the round points toward the target area.

(3) Place the carry bag (with CLU) on the left side of the round by the forward end.

(4) Lay on the left side along the left side of the round next to the carry bag (Figure 2-26). Maintain a low profile to limit observation of movement.

(5) Remove the CLU from the carry bag.

(6) Turn the power switch to the NIGHT position.

(7) Connect the CLU to the round.

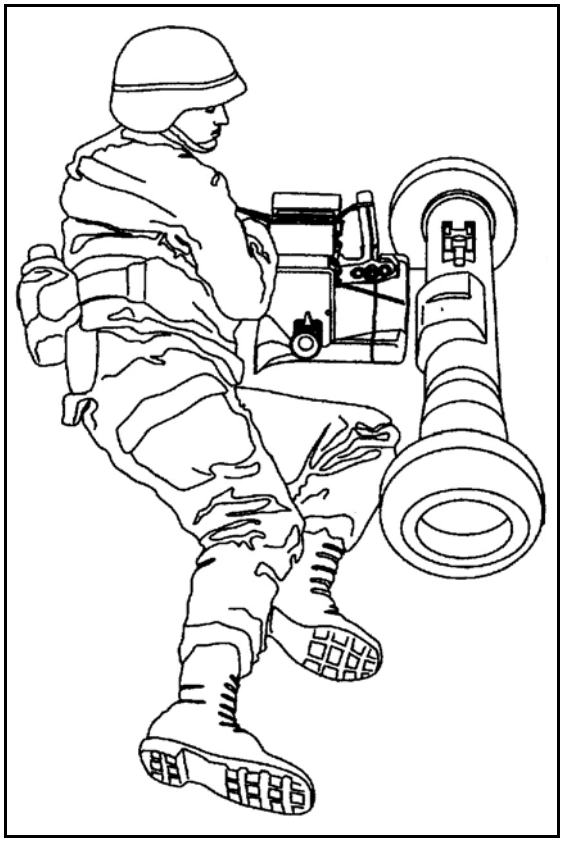

Figure 2-26. Preparing to connect the CLU.

(8) Remove the forward end cap (Figure 2-27).

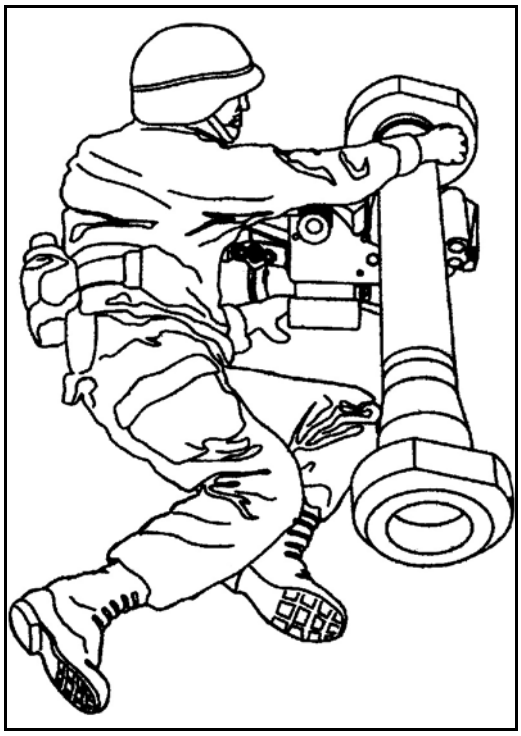

Figure 2-27. Remove the forward end cap.

CAUTION
With the forward end cap removed, the seeker is exposed. Use extreme caution when tipping the Javelin forward to ensure no foreign material comes in contact with the seeker.

(9) Place the forward end cap directly under the open end of the Javelin.

(10) Open the NVS and daysight lens covers.

(11) Check the backblast area. Ensure no personnel are located in the primary danger zone or caution areas.

(12) Position the body so it is parallel with the Javelin with the left hand tightly on the left handgrip. Placing the left hand on left handgrip helps guide the Javelin and maintain control. The right shoulder should be just behind the shoulder pad to balance the weight.

(13) The gunner tilts his body and the Javelin to the left side and, at the same time, reaches out with the right hand to secure the forward end cap (Figure 2-28).

NOTE: The forward end cap supports the Javelin's weight when in the prone position.

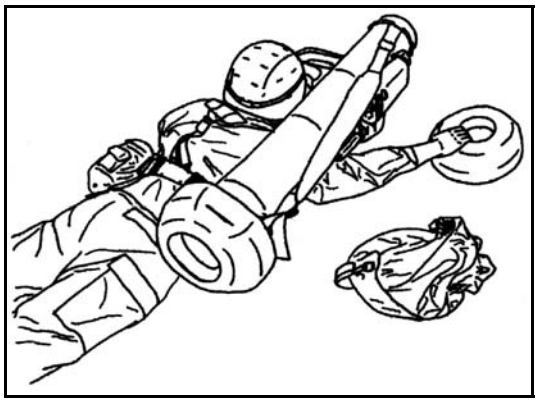

Figure 2-28. Reaching for forward end cap.

(14) Grasp the forward end cap, hold it with the inside of the forward end cap facing toward the CLU, and the flat side of the forward end cap facing up.

(15) Place the flat side of the forward end cap against the round shoulder pad (Figure 2-29).

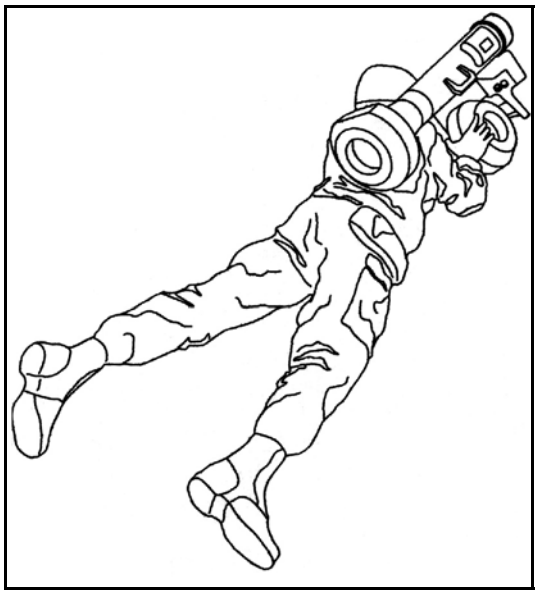

Figure 2-29. Placing end cap.

(16) Slide the forward end cap forward until the forward end cap locking ring contacts the shock absorber on the battery compartment. This wedges the forward end cap into position (Figure 2-30).

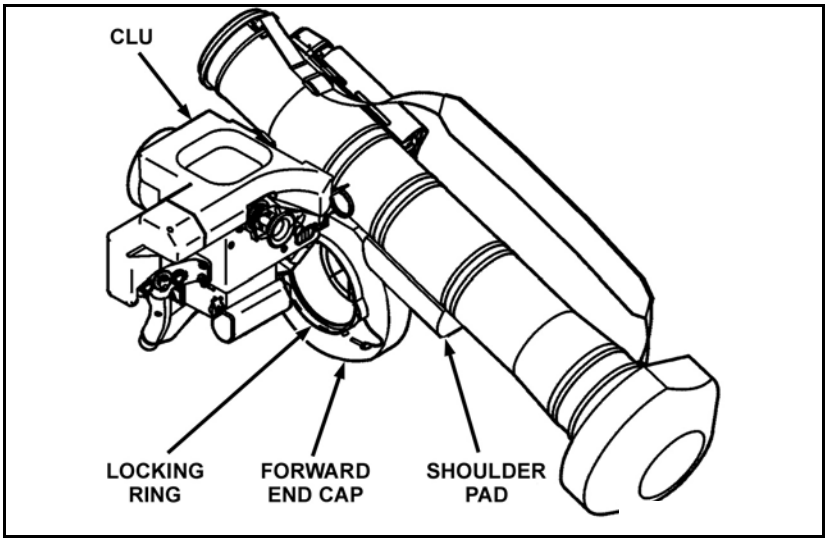

Figure 2-30. Placement of forward end cap in prone position.

(17) Slowly lower the Javelin until it rests on the forward end cap. Slide the body forward so the right shoulder is against the forward end cap.

e. Prone Supported Position Check.

(1) Ensure reaching the right handgrip switches is possible and easy to operate.

(2) Ensure the Javelin is supported by the forward end cap and is not resting on the shoulder (Figure 2-31).

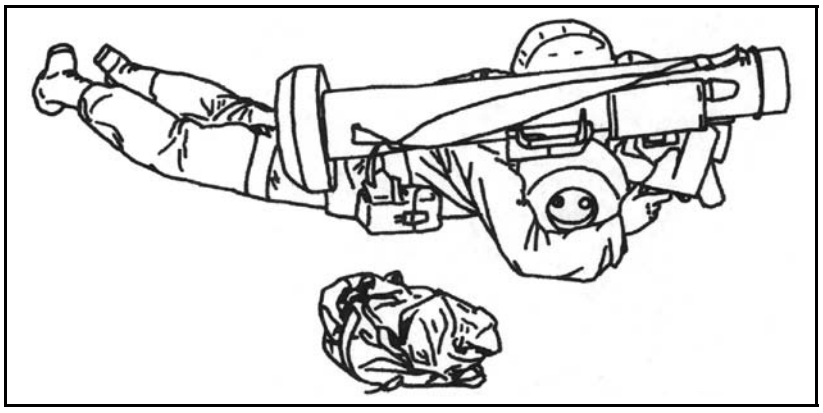

Figure 2-31. Prone supported firing position.

(3) Pull the Javelin tightly into the body until the forward end cap fits against the right shoulder.

WARNINGS

1. **Injury will occur if the body is extended into the backblast area. If injured, seek medical help immediately.**
2. **Keep body at a 30-degree angle away from the round when firing from the prone position.**

(4) Place the body at a 30-degree angle to the length of the round (intended direction of fire) to prevent the legs from extending into the backblast area (Figure 2-32).

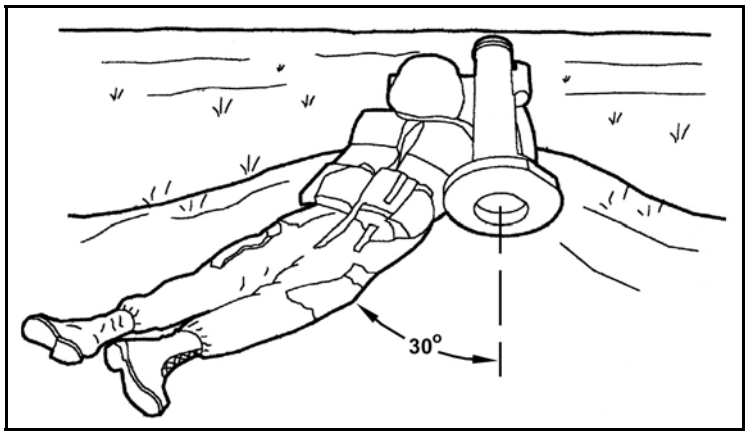

Figure 2-32. Correct prone body position.

(5) Check the overhead flight path between the target and the firing position by sighting along the top of the round. The missile must have a clear flight path once launched.

(6) The gunner is now prepared to fire the Javelin.

2-6. RESTORE TO CARRYING CONFIGURATION

To restore the Javelin to the carrying configuration, the gunner turns the power switch to the OFF position, places the Javelin on the ground, closes the lens cover, replaces the forward end cap, disconnects the CLU from the round. If the seeker has been activated, the gunner replaces the BCU by installing a new one, and places the CLU in the carry bag.

a. **Turn the Power Switch to OFF**. The gunner turns the power switch to the DAY position and waits for the flipper mirror to switch to the day sight position (about 2 seconds), then he turns the power switch to OFF (Figure 2-33, page 2-22).

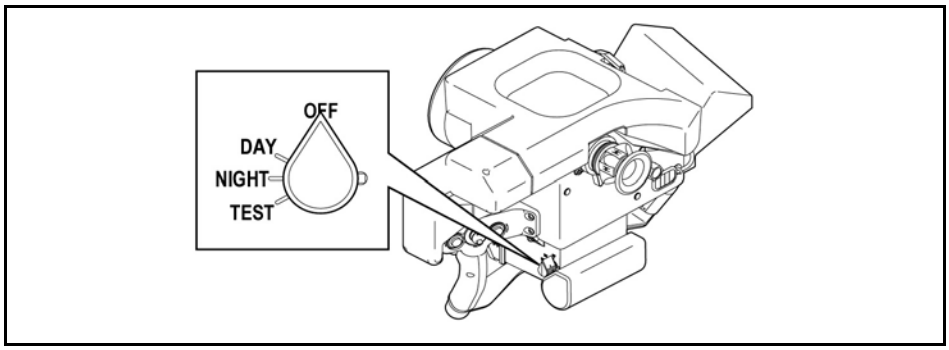

Figure 2-33. Power switch OFF position.

b. **Place the Javelin on the Ground**. When placing the Javelin on the ground, rotate the Javelin so the round rests on the ground and the handgrips of the CLU are pointing skyward.

c. **Close the CLU Lens Covers**. Close the DAY sight and NVS lens cover. Ensure the lens covers are firmly seated in place.

d. **Replace the Forward End Cap**.

(1) Grasp the handgrip with the right hand and lift the forward end of the round off the top of the forward end cap (Figure 2-34).

(2) Check to ensure the forward end cap latch is in the open position.

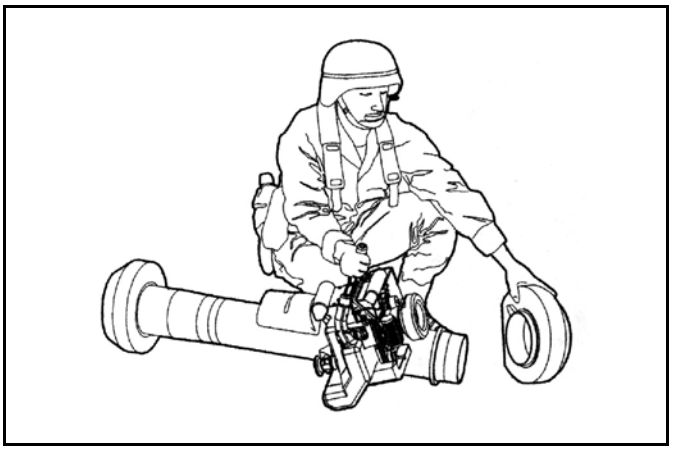

Figure 2-34. Replace forward end cap.

(3) Align the forward end cap latch handle with the BCU pylon.

(4) Slide the forward end cap onto the round and turn the latch clockwise to engage the locks.

(5) Reinstall the locking pin in the hole in the forward end cap (Figure 2-35).

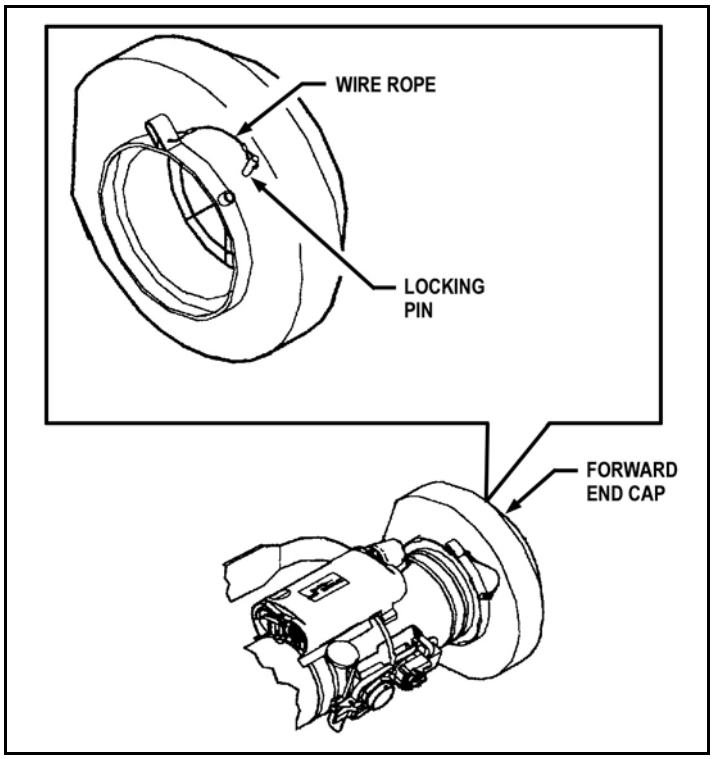

Figure 2-35. Forward end cap locking pin.

e. **Disconnect the CLU from the Round**.

(1) To disconnect the CLU from the round, depress the latch release on the round (Figure 2-36).

(2) Using the handgrip, lift up and rotate the CLU toward the forward end cap. The CLU rotates away from the round interface connector and the round hooks.

(3) Reinstall the connector covers on the interface connectors on the CLU and on the round. If the seeker was activated, replace the BCU.

(4) Place the CLU in the CLU carry bag with the handgrips up and the eyepiece toward the back of the carry bag.

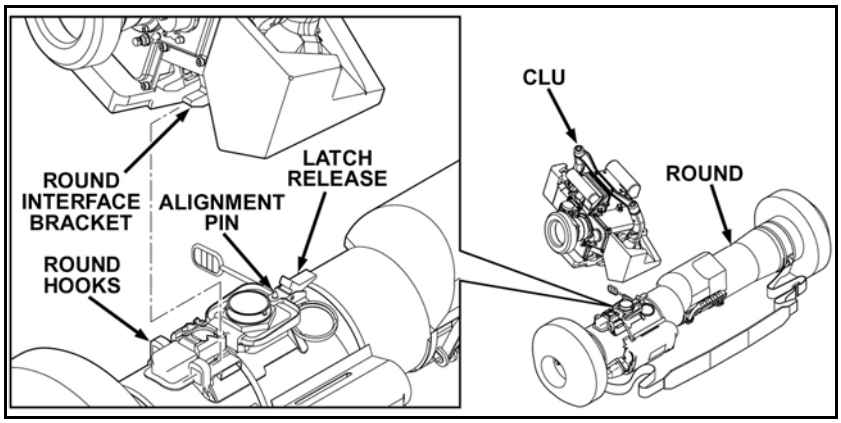

Figure 2-36. Disconnect the CLU from the round.

f. **Replace the BCU**. If the seeker has been activated, replace the BCU. To replace the BCU, the gunner:

(1) Remove the expended BCU.

(2) Kneel on the left side of the round and position the Javelin on the ground so the handgrips point up.

(3) If BCU has solid heat shield (Figure 2-37):

- Lift BCU latch with the thumb.
- Slide the BCU to the rear to release it from the guide pins.

(4) If BCU has grilled heat shield (Figure 2-38):

- Push down on the BCU latch with the thumb.
- Grasp the BCU with the opposite hand and slide it to rear to release it from the guide pins.

g. **Install a New BCU.**

(1) Remove the shipping plug that protects the internal gas bottle.

(2) Inspect BCU status indicator to ensure the replacement BCU is operational.

(3) Place BCU on the round's guide pins with the catch to the rear of round, slide the BCU onto the guide pins. Ensure the BCU snaps into place.

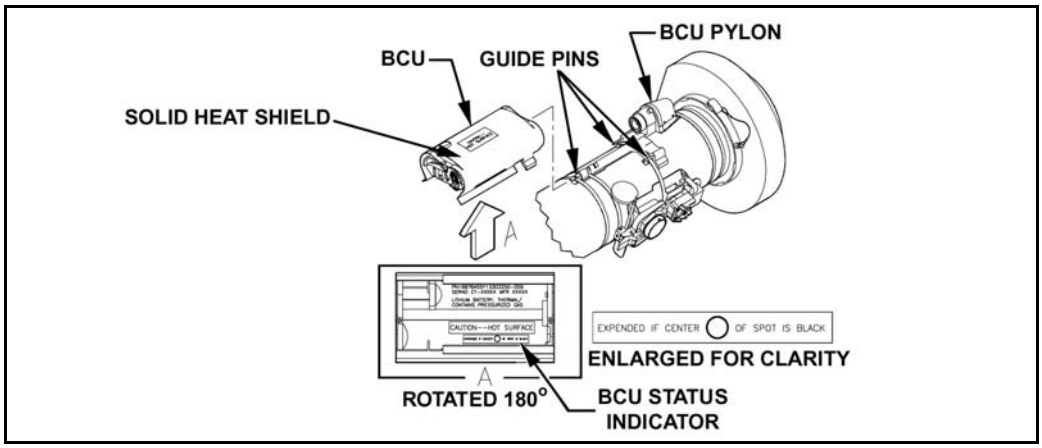

Figure 2-37. Old battery coolant unit.

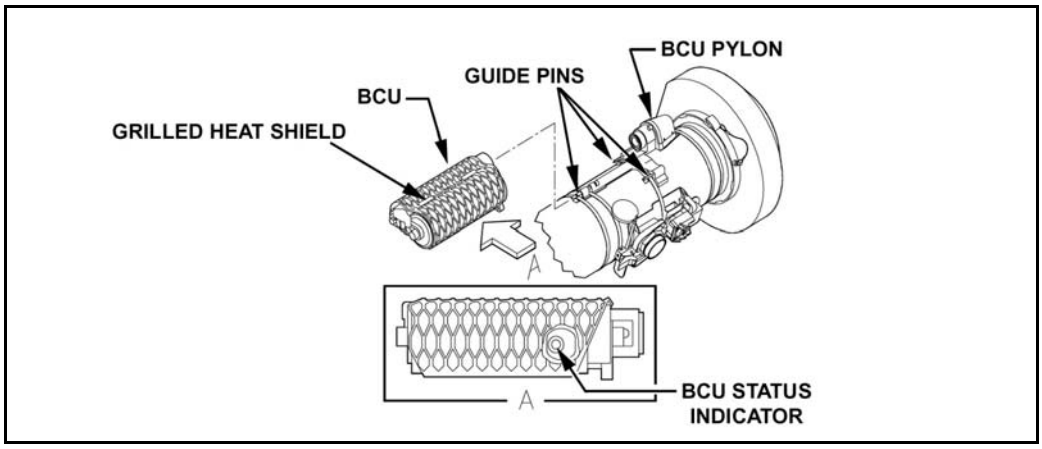

Figure 2-38. New battery coolant unit.

2-7. CARRYING TECHNIQUES

Three techniques are used for carrying the Javelin. The choice is based on the factors of METT-TC situation and the distance to be traveled.

a. **Tactical Carry**. This technique is used when moving into position, between positions, and when enemy contact is likely (Figure 2-39).

(1) The CLU and round are connected. The Javelin is carried on the gunner's right shoulder, balanced on the shoulder pad. The left hand holds the left handgrip and the right hand is on top of the round.

(2) The gunner's assigned weapon is slung across the back.

(3) The round can be cocked to the side so the gunner is able to see. Do not attempt to move while looking through the CLU. The end caps are secured to the round. Remove the forward end cap before firing.

(4) The NVS and day sight lens covers are closed to prevent damage.

Figure 2-39. Tactical carry technique.

b. **Short-Distance Carry**. The short-distance carry technique is used when enemy contact is possible. The rifle is slung over the gunner's left shoulder. The CLU is in the carry bag. The carry bag is carried on the gunner's left side with the shoulder strap over the left shoulder or across the chest. Using the short-distance carry technique, the round can be carried in one of two ways.

(1) ***Round Parallel to Ground***. The round is carried on the gunner's right side with the shoulder strap over the right shoulder. The round is parallel to the ground, waist high with the forward end cap pointed in the direction of movement. The gunner's right hand may be placed on the shoulder strap to keep the round from swaying and to help keep the shoulder strap on the shoulder (Figure 2-40A, page 2-26).

(4) ***Round Forward End Pointed Down***. The round is carried on the gunner's right side with the shoulder strap over the right shoulder. The forward end cap is pointed down with the round behind the right shoulder, parallel to the gunner's body. The gunner's right hand may be placed on the shoulder strap to help keep the strap on the shoulder (Figure 2-40B).

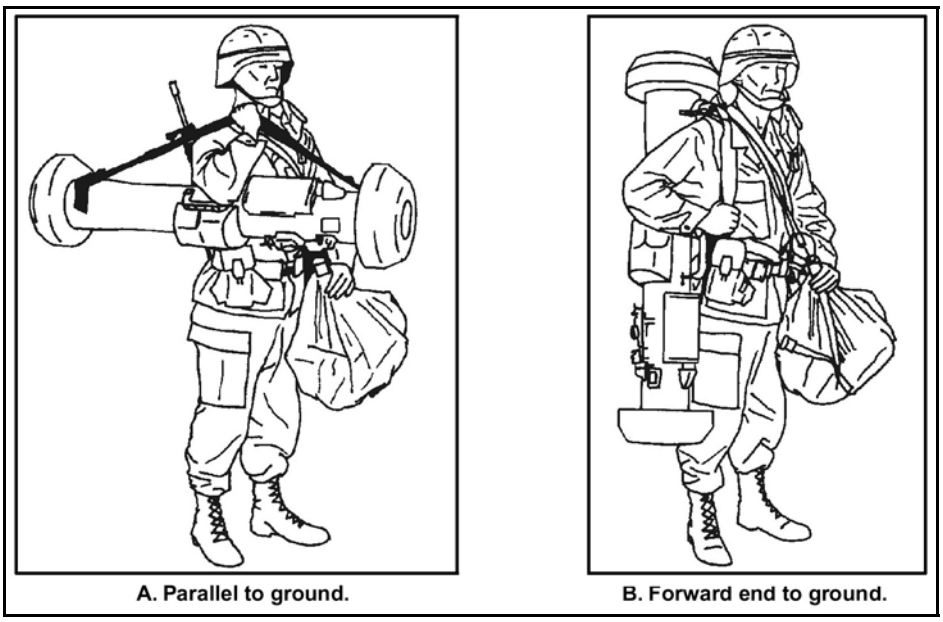

Figure 2-40. Short-distance carry techniques.

c. **Long-Distance Carry**. The long-distance carry technique is used when contact is not likely (Figure 2-41).

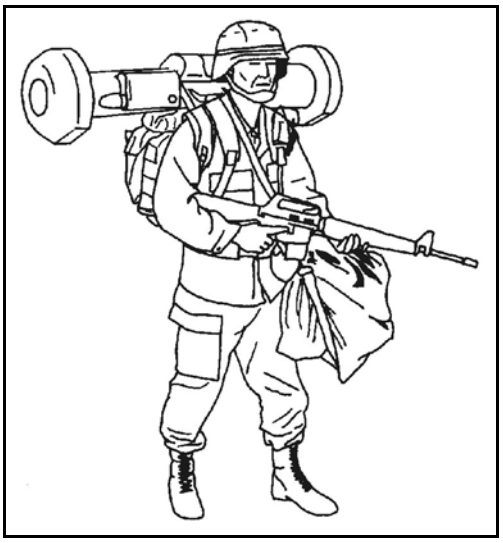

Figure 2-41. Long-distance carry technique.

(1) CLU carry position.

(a) Place the CLU in the carry bag.

(b) Ensure the carry bag is on the gunner's left side with the shoulder strap over the left shoulder or across the chest.

(c) Use a second strap on the carry bag to fasten the CLU to the gunner's waist. This procedure prevents the carry bag from bouncing when the gunner walks.

(2) Stow the round on rucksack.

(a) Place the rucksack on the ground with the frame face down and the top of the pack facing away.

(b) Locate the two long web straps extending from the top of the frame and across the front of the pack (Figure 2-42).

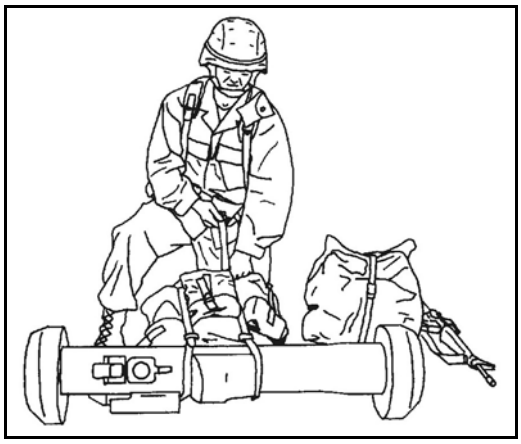

Figure 2-42. Secure the round to the rucksack.

(c) Open the straps to form a loop at the top of the rucksack frame.

(d) Pick up the round and slide it through the strap loops.

(e) Make sure the BCU is facing forward to prevent damage to it when the rucksack is placed on the ground.

(f) Tighten the straps by pulling on the ends. Continue until the straps are tight.

(g) Place the rucksack on the back making sure the round well balanced and evenly distributed across the top of the frame. Make sure the round is parallel to the ground.